In the claims:

Please amend the claims as follows:

Please cancel claims 1-32 and add the following new claims.

Claims 1-32 (canceled)

33. (new) A method for VLAN packet classification, comprising:

receiving an inbound packet;

determining whether the inbound packet includes VLAN ID;

if the determination is made that the inbound packet includes VLAN ID;

retrieving the classification mode type from a mode register;

determining the classification mode type;

if the determination is made that the classification mode type is a first classification mode, determining if the VLAN ID is valid, and if the VLAN ID is valid, transmitting the packet to a switching controller; and

classifying the packet to a VLAN associated with the VLAN ID associated with the port;

if the determination is made that the classification mode type is a second classification mode, transmitting the packet to the switching controller, retrieving a VLAN ID associated with the port, classifying the packet to a VLAN associated with the VLAN ID associated with the port; and

if the determination is made that the classification mode type is a third classification mode, retrieving a protocol type associated with the packet, and determining if the protocol type is supported, and if the determination is made that the protocol type is supported, transmitting the packet to the switching controller, classifying the packet to a VLAN based on the protocol VLAN ID.

34. (new) The method as recited in claim 33, wherein the first classification mode is a PASS mode.

35. (new) The method as recited in claim 33, wherein the second classification mode is a FORCE mode.

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36. (new) The method as recited in claim 33, wherein the third mode is a PORTOCOL mode.

37. (new) The method as recited in claim 33, wherein if the determination is made that the classification mode type is a third classification mode, further comprising examining particular bits of the packet; and creating a protocol bit indicator from the examined bits.

38. (new) The method as recited in claim 37, further comprising using the protocol bit indicator to perform a lookup on the protocol bindings table used to determine if the protocol type is supported.

39. (new) A method for VLAN packet classification, comprising:

     determining if an outbound packet includes a VLAN ID;

     if the determination is made that the outbound backet includes VLAN ID;

     retrieving a tagging mode type from a mode register;

     determining the tagging mode type;

     if the determination is made that the tagging mode type is a first tagging mode type, retaining the VLAN ID as received in the packet;

     if the determination is made that the tagging mode type is a second tagging mode type, retrieving the VLAN ID from the outbound packet, replacing VLAN ID in the outbound packet with a VLAN ID to which the packet is classified; and

     if the determination is made that the tagging mode type is a third tagging mode type, retrieving and removing the VLAN ID from the outbound packet;

40. (new) The method as recited in claim 39, wherein the first tagging mode type is a PASS mode.

41. (new) The method as recited in claim 39, wherein the second tagging mode type is a FORCE mode.

42. (new) The method as recited in claim 40, wherein the third tagging mode type is a REMOVE mode.

43. (new) A method for VLAN packet classification, comprising:

     determining the type of data packet,

     if the determination is made that the data packet is an inbound packet;

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determining whether the inbound packet includes VLAN ID

if the determination is made that the inbound packet includes VLAN ID

retrieving the classification mode type from a mode register

determining the classification mode type

if the determination is made that the classification mode type is a first classification mode, determining if the VLAN ID is valid, and if the VLAN ID is valid, transmitting the packet to a switching controller, and

classifying the packet to a VLAN associated with the VLAN ID associated with the port

if the determination is made that the classification mode type is a second classification mode, transmitting the packet to the switching controller, retrieving a VLAN ID associated with the port, classifying the packet to a VLAN associated with the VLAN ID associated with the port; and

if the determination is made that the classification mode type is a third classification mode, retrieving a protocol type associated with the packet, and determining if the protocol type is supported, and if the determination is made that the protocol type is supported, transmitting the packet to the switching controller, classifying the packet to a VLAN based on the protocol VLAN ID;

if the determination is made that the data packet is an outbound packet;

determining if the outbound packet includes a VLAN ID;

if the determination is made that the outbound packet includes VLAN ID;

retrieving a tagging mode type from a mode register;

determining the tagging mode type;

if the determination is made that the tagging mode type is a first tagging mode type, retaining the VLAN ID as received in the packet;

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if the determination is made that the tagging mode type is a second tagging mode type, retrieving the VLAN ID from the outbound packet, replacing VLAN ID in the outbound packet with a VLAN ID to which the packet is classified; and

if the determination is made that the tagging mode type is a third tagging mode type, retrieving and removing the VLAN ID from the outbound packet.

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